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#1	Search **urokinase**	07:28:50	10343

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1: Kooistra T, van den Berg J, Tons A, Platenburg G, Rijken DC, van den Berg E. Related Artic

Butyrate stimulates tissue-type plasminogen-activator synthesis in cultured human endothelial cells.
Biochem J. 1987 Nov 1;247(3):605-12.
PMID: 2827633 [PubMed - indexed for MEDLINE]

2: Okabayashi K, Kaneda T, Arimura H. Related Artic

Effect of butyrate on the expression of the human preprourokinase gene introduced into Chinese hamster ovary cells.
Cell Struct Funct. 1989 Oct;14(5):579-86.
PMID: 2620348 [PubMed - indexed for MEDLINE]

3: Palermo DP, DeGraaf ME, Marotti KR, Rehberg E, Post LE. Related Artic

Production of analytical quantities of recombinant proteins in Chinese hamste ovary cells using sodium butyrate to elevate gene expression.
J Biotechnol. 1991 Jun;19(1):35-47.
PMID: 1369310 [PubMed - indexed for MEDLINE]

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09/815,533 SEARCH RESULTS/HISTORY

(FILE 'HOME' ENTERED AT 09:33:45 ON 14 AUG 2002)

INDEX 'ADISALERTS, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 09:33:58 ON 14 AUG 2002

SEA (UROKINASE OR UPA) AND (PURIFICATION OR CHROMATOGRAPHY)

1	FILE ADISALERTS
7	FILE AGRICOLA
15	FILE ANABSTR
2	FILE AQUASCI
12	FILE BIOBUSINESS
7	FILE BIOCOMMERCE
441	FILE BIOSIS
198	FILE BIOTECHABS
198	FILE BIOTECHDS
227	FILE BIOTECHNO
15	FILE CABA
233	FILE CANCERLIT
388	FILE CAPLUS
11	FILE CEABA-VTB
4	FILE CEN
5	FILE CIN
5	FILE CONFSCI
33	FILE DDFB
32	FILE DDFU
70	FILE DGENE
33	FILE DRUGB
93	FILE DRUGU
473	FILE EMBASE
76	FILE ESBIOBASE
14	FILE FEDRIP
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2	FILE FSTA
18	FILE GENBANK
41	FILE IFIPAT
83	FILE JICST-EPLUS
1	FILE KOSMET
104	FILE LIFESCI
828	FILE MEDLINE
2	FILE NIOSHTIC
7	FILE NTIS
68	FILE PASCAL
1	FILE PHAR
13	FILE PHIN
40	FILE PROMT
542	FILE SCISEARCH
144	FILE TOXCENTER
2703	FILE USPATFULL
23	FILE USPAT2
182	FILE WPIDS
182	FILE WPINDEX

L1 QUE (UROKINASE OR UPA) AND (PURIFICATION OR CHROMATOGRAPHY)

FILE 'MEDLINE, CAPLUS, SCISEARCH, BIOSIS, USPATFULL, EMBASE' ENTERED AT 09:36:17 ON 14 AUG 2002

L2 1598 S (UROKINASE OR UPA) (S) (PURIFICATION OR CHROMATOGRAPHY)
L3 18 S L2 AND ((ION (W) EXCHANGE) AND BENZAMIDINE)
L4 17 DUP REM L3 (1 DUPLICATE REMOVED)

FILE 'SCISEARCH' ENTERED AT 09:39:30 ON 14 AUG 2002

E ARINI A/AU 25
L5 0 S (E3) AND (UROKINASE)
E COPPOLECCHIA R/AU 25
L6 0 S (E3) AND (UROKINASE)
E PAGANI F P/AU 25
E PAGANI F/AU 25
L7 0 S (E3) AND (UROKINASE)
E LUGANO D/AU 25
E HERBST D/AU 25
L8 0 S (E3 OR E4 OR E5 OR E6 OR E7 OR E8 OR E9 OR E10) AND (UROKINAS
E TOGNINI A/AU 25
L9 0 S (E3) AND (UROKINASE)

09/815,533 SEARCH RESULTS/HISTORY

=>

09/815,533 SEARCH RESULTS/HISTORY

L4 ANSWER 1 OF 17 USPATFULL
ACCESSION NUMBER: 2002:198675 USPATFULL
TITLE: HIGHLY CRYSTALLINE UROKINASE
INVENTOR(S): WANG, JIEYI, GURNEE, IL, UNITED STATES
NIENABER, VICKI L., GURNEE, IL, UNITED STATES
HENKIN, JACK, HIGHLAND PARK, IL, UNITED STATES
SMITH, RICHARD A., LAKE BLUFF, IL, UNITED STATES
WALTER, KARL A., LAKE BLUFF, IL, UNITED STATES
SEVERIN, JEAN M., WADSWORTH, IL, UNITED STATES
EDALJI, ROHINTON, WADSWORTH, IL, UNITED STATES
JOHNSON, ROBERT W., JR., GURNEE, IL, UNITED STATES
HOLZMAN, THOMAS F., LIBERTYVILLE, IL, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002106775	A1	20020808	
APPLICATION INFO.:	US 1999-264468	A1	19990305	(9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ABBOTT LABORATORIES, DEPT. 377 - AP6D-2, 100 ABBOTT PARK ROAD, ABBOTT PARK, IL, 60064-6050
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 1243
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present disclosure describes a biologically active modified urokinase and high resolution crystalline forms of modified urokinase. Polynucleotides which encode modified urokinase and methods for making modified urokinase are also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 2 OF 17 USPATFULL
ACCESSION NUMBER: 2001:93478 USPATFULL
TITLE: Urokinase-type plasminogen activator receptor
INVENTOR(S): Dan.o slashed. , Keld, Charlottenlund, Denmark
Blasi, Francesco, Charlottenlund, Denmark
Roldan, Ann Louring, Vallensb.ae butted.k, Denmark
Cubellis, Maria Vittoria, Naples, Italy
Masucci, Maria Teresa, Naples, Italy
Appella, Ettore, Chevy Chase, MD, United States
Schleuning, W.D., Berlin, Germany, Federal Republic of
Behrendt, Niels, Bagsv.ae butted.rd, Denmark
R.o slashed.nne, Ebbe, Copenhagen, Denmark
Kristensen, Peter, Copenhagen, Denmark
Pollanen, Jari, Espoo, Finland
Salonen, Eeva-Marjatta, Espoo, Finland
Stephens, Ross W., Vantaa, Finland
Tapiovaara, Hannele, Helsinki, Finland
Vaheri, Antti, Kauniainen, Finland
M.o slashed.ller, Lisbeth Birk, Bagsv.ae butted.rd, Denmark
Ellis, Vincent, Copenhagen, Denmark
Lund, Leif R.o slashed.ge, Copenhagen, Denmark
Ploug, Michael, Copenhagen, Denmark
Pyke, Charles, S.o slashed.borg, Denmark
Patthy, Laszlo, Budapest, Hungary
PATENT ASSIGNEE(S): Cancerforskningsfondet af 1989, Denmark (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6248712	B1	20010619	
APPLICATION INFO.:	US 1995-442108		19950516	(8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-319052, filed on 6 Oct 1994, now patented, Pat. No. US 5891644 Continuation of Ser. No. US 824189, now abandoned Continuation-in-part of Ser. No. US 1989-374854, filed on 3 Jul 1989, now abandoned Continuation-in-part of Ser. No. US 1989-334613, filed on 7 Apr 1989, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Feisee, Lila
ASSISTANT EXAMINER: Basi, Nirmal S.
LEGAL REPRESENTATIVE: Cooper, Iver P.
NUMBER OF CLAIMS: 28

09/815,533 SEARCH RESULTS/HISTORY

EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 86 Drawing Figure(s); 54 Drawing Page(s)
LINE COUNT: 6444
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Activation of plasminogen to plasmin is inhibited by preventing the binding of a receptor binding form of urokinase-type plasminogen activator to a urokinase-type plasminogen activator receptor in a mammal, thereby preventing the urokinase-type plasminogen activator from converting plasminogen into plasmin. DNA fragments which encode for soluble, active fragments of the urokinase-type plasminogen activator receptor are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 3 OF 17 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 2000:85636 SCISEARCH
THE GENUINE ARTICLE: 277BR
TITLE: Construction and characterization of a mutant of single-chain urokinase-type plasminogen activator (Ser(175)-His(187)-mscu-PA)
AUTHOR: Xue Y M (Reprint); Zhu H; Shi W; Liu W; Liu J N; Ma Z
CORPORATE SOURCE: NANJING UNIV, DEPT BIOCHEM, NATL KEY LAB PHARMACEUT BIOTECHNOL, NANJING 210093, PEOPLES R CHINA
COUNTRY OF AUTHOR: PEOPLES R CHINA
SOURCE: ACTA BIOCHIMICA ET BIOPHYSICA SINICA, (JAN 2000) Vol. 32, No. 1, pp. 26-30.
Publisher: SHANGHAI INST BIOCHEMISTRY, ACADEMIA SINICA, 320 YUE-YANG ROAD, SHANGHAI 20031, PEOPLES R CHINA.
ISSN: 0582-9879.
DOCUMENT TYPE: Article; Journal
LANGUAGE: Chinese
REFERENCE COUNT: 8
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Single-chain **urokinase**-type plasminogen activator (scu-PA) is the precursor of double-chain **urokinase** (tcu-PA), which has a much higher intrinsic catalytic activity than other zymogens of the serine protease family. To restore the ''zymogen triad'' of Asp-His-Ser in the serine protease family, the mutant gene of scu-PA (mscu-PA, Ala(175) --> Ser(175), Tyr187 --> His(187)) was constructed by the method of oligonucleotide-directed, site-specific mutagenesis in order to reduce its intrinsic catalytic activity. mscu-PA was expressed in E. coli BL21. After denaturation and renaturation in vitro, the mscu-PA was purified to homogeneity by SP-Sepharose **ion-exchange chromatography**, Sephacryl S-200 **chromatography** and **Benzamidine**-Sepharose affinity adsorption. mscu-PA had the same activity to plasmin as scu-PA, The catalytic efficiency (measured by k(cat)/K-m) to synthetic substrate S-2444 was 2.5-fold lower than that of scu-PA, and the activity against Glu-plasminogen was also reduced. After activation by plasmin, mtcu-PA and tcu-PA had similar catalytic efficiency against S-2444 and Glu-plasminogen. The results suggest that the intrinsic catalytic activity of mscu-PA be really reduced after restoring the ''zymogen triad''.

L4 ANSWER 4 OF 17 USPATFULL
ACCESSION NUMBER: 1999:43412 USPATFULL
TITLE: Vectors and methods for recombinant production of uPA-binding fragments of the human urokinase-type plasminogen receptor (uPAR)
INVENTOR(S): Dan.o slashed. , Keld, Charlottenlund, Denmark
Blasi, Francesco, Charlottenlund, Denmark
Roldan, Ann Louring, Vallensb.ae butted.k, Denmark
Cubellis, Maria Vittoria, Napoli, Italy
Masucci, Maria Teresa, Napoli, Italy
Appella, Ettore, Chevy Chase, MD, United States
Schleuning, Wolf-Dieter, Berlin, Germany, Federal Republic of
Behrendt, Niels, Bagsv.ae butted.rd, Denmark
R.o slashed.nne, Ebbe, Copenhagen, Denmark
Kristensen, Peter, Copenhagen, Denmark
Pollanen, Jari, Espoo, Finland
Salonen, Eeva-Marjatta, Espoo, Finland
Stephens, Ross W., Helsinki, Finland
Tapiovaara, Hannele, Helsinki, Finland
Vaheri, Antti, Kauniainen, Finland
M.o slashed.ller, Lisbeth Birk, Bagsv.ae butted.rd, Denmark
Ellis, Vincent, Copenhagen, Denmark
Lund, Leif R.o slashed.ge, Copenhagen, Denmark

09/815,533 SEARCH RESULTS/HISTORY

	Ploug, Michael, Copenhagen, Denmark Pyke, Charles, S.o slashed.borg, Denmark Patthy, Laszlo, Budapest, Hungary
PATENT ASSIGNEE(S):	Cancerforskningsfondet af 1989, Copenhagen K, Denmark (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5891664		19990406
APPLICATION INFO.:	US 1994-319052		19941006 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-824189, filed on 6 Dec 1991, now abandoned which is a continuation-in-part of Ser. No. US 1989-374854, filed on 3 Jul 1989, now abandoned which is a continuation-in-part of Ser. No. US 1989-334613, filed on 7 Apr 1989, now abandoned

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Walsh, Stephen G.
ASSISTANT EXAMINER:	Fitzgerald, David L.
LEGAL REPRESENTATIVE:	Cooper, Iver P.
NUMBER OF CLAIMS:	22
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	83 Drawing Figure(s); 53 Drawing Page(s)
LINE COUNT:	6449

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Activation of plasminogen to plasma is inhibited by preventing the binding of a receptor binding form of urokinase-type plasminogen activator to a urokinase-type plasminogen activator receptor in a mammal, thereby preventing the urokinase-type plasminogen activator from converting plasminogen into plasmin. DNA fragments which encode for soluble, active fragments of the urokinase-type plasminogen activator are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 5 OF 17 USPATFULL

ACCESSION NUMBER:	97:44755 USPATFULL
TITLE:	Phospholipid-targeted thrombolytic agents
INVENTOR(S):	Tait, Jonathan F., Seattle, WA, United States Fujikawa, Kazuo, Seattle, WA, United States
PATENT ASSIGNEE(S):	The University of Washington, Seattle, WA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5632986		19970527
APPLICATION INFO.:	US 1995-441006		19950515 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1993-934651, filed on 7 Jan 1993, now abandoned which is a continuation-in-part of Ser. No. US 1991-697364, filed on 9 May 1991, now abandoned

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Jacobson, Dian C.
LEGAL REPRESENTATIVE:	Sughrue, Mion, Zinn, Macpeak & Seas
NUMBER OF CLAIMS:	3
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT:	1053

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Conjugates with an affinity for phospholipids are disclosed. The conjugates comprise a first compound having affinity for phospholipids, with a binding constant that is not greater than about 10.sup.-7 M and a second compound that lyses thrombi or is a precursor of a compound that lyses thrombi.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:	1997:471135 CAPLUS
DOCUMENT NUMBER:	127:158290
TITLE:	**Purification** of high-molecular-weight and low-molecular-weight **urokinase** and kinetic study
AUTHOR(S):	Sun, Tian-Xiao; Wang, Hong-Mei; Xu, Chang-Fa
CORPORATE SOURCE:	Natl. Lab. Protein Eng. Plant Gene Eng., Peking Univ., Beijing, 100871, Peop. Rep. China
SOURCE:	Shengwu Huaxue Zazhi (1997), 13(3), 344-349

09/815,533 SEARCH RESULTS/HISTORY

CODEN: SHZAE4; ISSN: 1000-8543
PUBLISHER: Zhongguo Shengwu Huaxue Yu Fenzi Shengwu Xuehui
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB High-mol.-wt. urokinase (HUK) and low-mol.-wt. urokinase (LUK) were purified from crude human urokinase by **benzamidine** affinity chromatog. followed by SP **ion-exchange** chromatog. The specific activity detd. by fibrin plate of HUK is 2.9 .times. 105 IU/mg protein and LUK 3.5 .times. 105/mg protein. The total yield of the purifn. is above 70%. Purified HUK and LUK migrated as single bands of 54 and 33 kd, resp. With peptide substrate S2444, HUK showed Km at 64 .mu.mol/L and kcat 15 s-1; and for LUK, Km is 49 .mu.mol/L, kcat is 13 s-1. The catalytic efficiency (kcat/Km) of LUK is slightly higher than that of HUK.

L4 ANSWER 7 OF 17 USPATFULL
ACCESSION NUMBER: 95:86273 USPATFULL
TITLE: Heterobifunctional antibodies having dual specificity for fibrin and thrombolylic agents and methods of use
INVENTOR(S): Haber, Edgar, Princeton, NJ, United States
Bode, Christoph, Heidelberg, Germany, Federal Republic of
PATENT ASSIGNEE(S): The General Hospital Corporation, Boston, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5453269		19950926
APPLICATION INFO.:	US 1992-960305		19921013 (7)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-652107, filed on 8 Feb 1991, now abandoned which is a continuation-in-part of Ser. No. US 1988-159585, filed on 11 Jan 1988, now abandoned which is a continuation-in-part of Ser. No. US 1986-851554, filed on 14 Apr 1986, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1987-US860	19870414

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lacey, David L.
ASSISTANT EXAMINER: Budens, Robert D.
LEGAL REPRESENTATIVE: Sterne, Kessler, Goldstein & Fox
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 23 Drawing Figure(s); 19 Drawing Page(s)
LINE COUNT: 1824
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Heterobifunctional antibodies having dual specificities, one specificity directed against a thrombus, and the other specificity directed against a thrombolytic agent are disclosed. The invention also relates to methods of using these heterobifunctional antibodies to lyse a thrombus.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 17 USPATFULL
ACCESSION NUMBER: 95:49915 USPATFULL
TITLE: Human PAI-2
INVENTOR(S): Stephens, Ross W., Oslo, Norway
Golder, Jeffrey P., Mona Vale, Australia
Antalis, Toni M., Toowong, Australia
Barnes, Thomas M., Boston, MA, United States
Clark, Michell A., Crows Nest, Australia
Devine, Peter L., Helensvale, Australia
Goss, Neil H., Wahroonga, Australia
Lehrbach, Philip R., Wahroonga, Australia
PATENT ASSIGNEE(S): Biotechnology Australia, Pty., Ltd., New South Wales, Australia (non-U.S. corporation)
Australian National University, Acton, Australia (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5422090		19950606
APPLICATION INFO.:	US 1992-911531		19920715 (7)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1991-765495, filed on 26 Sep 1991, now abandoned And Ser. No. US 1991-693542, filed on 30 Apr 1991, now abandoned which

is a division of Ser. No. US 1987-25815, filed on 13 Mar 1987, now abandoned , said Ser. No. US -765495 which is a continuation of Ser. No. US 1986-860336, filed on 13 Jun 1986, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	AU 1984-6531	19840813
	AU 1986-5017	19860313
	AU 1986-6033	19860522
	AU 1986-8100	19860918
	AU 1986-9104	19861121

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Schwartz, Richard A.
ASSISTANT EXAMINER: Brown, Gary L.
LEGAL REPRESENTATIVE: Foley & Lardner
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 72 Drawing Figure(s); 60 Drawing Page(s)
LINE COUNT: 3634
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Minactivin (also known as Plasminogen Activator Inhibitor-2 [PAI-2]), a protein inactivator of **urokinase**-type plasminogen activator, has been shown to be a natural inactivator of this plasminogen activator which is associated with invasive tumors, and is therefore indicated as a crucial element in the body's normal defense against tumor invasion and metastasis. It may be produced by the cultivation of minactivin-producing cells in vitro, and recovery of the cell culture supernatant. By controlling the culture conditions, the protein minactivin may be produced in a partially purified form which may be used for diagnosis and treatment of tumors. The specification discloses **purification** of biologically active native minactivin, as well as peptides derived from minactivin and their amino acid sequences. The specification also discloses methods for production of PAI-2 by recombinant DNA technology, characterization of a PAI-2 gene sequence, and expression and **purification** of large quantities of biologically active PAI-2 from a recombinant host.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 17 USPATFULL
ACCESSION NUMBER: 93:48229 USPATFULL
TITLE: Protease resistant urokinase
INVENTOR(S): Blaber, Michael, Brisbane, CA, United States
Heyneker, Herbert L., Hillsborough, CA, United States
Vehar, Gordon A., San Carlos, CA, United States
PATENT ASSIGNEE(S): Genentech, Inc., South San Francisco, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5219569		19930615
APPLICATION INFO.:	US 1985-766858		19850816 (6)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1985-725468, filed on 22 Apr 1985, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Schwartz, Richard A.
ASSISTANT EXAMINER: Vogel, Nancy
LEGAL REPRESENTATIVE: Dreger, Walter H.
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 712
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel single-chain protease resistant urokinase derivatives are provided. In particular, derivatives are provided wherein the Lys.sub.135 Lys.sub.136 and Arg.sub.156 to Lys.sub.158 sites are rendered less susceptible to proteolytic cleavage are provided by occluding the sites or by covalently modifying them. Preferred covalent modifications are amino acid sequence variants at the sites where proteolysis of urokinase occurs. These are optimally produced by synthesis of single-chain urokinase mutants in recombinant cell culture. The novel urokinase derivatives herein offer the advantage of avoiding the generation of substantial two-chain urokinase, either in vivo or during recombinant cell culture. However, the derivatives continue function to activate plasminogen in initiating blood clot lysis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 10 OF 17 USPATFULL
ACCESSION NUMBER: 92:106768 USPATFULL
TITLE: Process for the production of urokinase using Saccharomyes cerevisiae
INVENTOR(S): Meyhack, Bernd, Magden, Switzerland
Heim, Jutta, Pratten, Switzerland
Burgi, Rolf, Basel, Switzerland
PATENT ASSIGNEE(S): Ciba-Geigy Corporation, Ardsley, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5175105		19921229	
APPLICATION INFO.:	US 1988-179345		19880408	(7)

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1987-9081	19870415
	GB 1987-14059	19870616
	IE 1987-3299	19871204

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Schwartz, Richard A.
ASSISTANT EXAMINER: Vogel, Nancy T.
LEGAL REPRESENTATIVE: Villamizar, JoAnn
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Figure(s); 16 Drawing Page(s)
LINE COUNT: 2140
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel human plasminogen activators of the urokinase type are produced by yeast cells transformed with a hybrid vector comprising a DNA sequence coding for said human plasminogen activator. Novel hybrid vectors, yeast hosts transformed with such hybrid vectors and processes for the production thereof are also provided. 77

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 11 OF 17 USPATFULL
ACCESSION NUMBER: 92:59787 USPATFULL
TITLE: Large scale production of plasminogen activator from normal human colon cells
INVENTOR(S): Feder, Joseph, St. Louis, MO, United States
Harakas, Nicholaos K., Chesterfield, MO, United States
Schaumann, Jon P., Kirkwood, MO, United States
Connolly, Daniel T., Manchester, MO, United States
Wittwer, Arthur J., Ellisville, MO, United States
PATENT ASSIGNEE(S): Monsanto Company, St. Louis, MO, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5132214		19920721	
APPLICATION INFO.:	US 1986-849933		19860409	(6)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Doll, John
ASSISTANT EXAMINER: Poulos, Gail
LEGAL REPRESENTATIVE: Meyer, Scott J.
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT: 885
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Plasminogen activators (PA) are obtained from cultured normal human colon cells which are adaptable to large scale production. A purified tissue PA (t-PA) is obtained from CCD-18Co normal human colon fibroblast cells which shows chemical differences from Bowes melanoma t-PA.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 12 OF 17 USPATFULL
ACCESSION NUMBER: 92:38310 USPATFULL
TITLE: Tissue plasminogen-activating factor and nonoclonal antibody

09/815,533 SEARCH RESULTS/HISTORY

INVENTOR(S): Suzuki, Akira, Utsunomiya, Japan
Itagaki, Yasuharu, Ohazaishibashi, Japan
Higashio, Kanji, Kawagoe, Japan
PATENT ASSIGNEE(S): Snow Brand Milk Products Co., Ltd., Sapporo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5112754		19920512
APPLICATION INFO.:	US 1990-483800		19900223 (7)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1986-841818, filed on 20 Mar 1986, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1985-61716	19850326

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Russel, Jeffrey E.
LEGAL REPRESENTATIVE: Oblon, Spivak, McClelland, Maier & Neustadt
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 714
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A novel tissue plasminogen activator having the following characteristics: molecualr weight of 65,000-72,000 Daltons as measured by SDS-PAGE electrophoresis using at 7.5% agarose gel; plasminogen activator specific activity of about 10.4.times.10.sup.4 IU/mg, wherein specific activity is defined as the ratio of fibrinolytic activity of purified t-PA measured on fibrin-agarose plates to milligrams of protein; about 83.1% absorption of t-PA by a fibrin-Sepharose column when applied; binds to a Concanavalin A column when applied; the fibrinolytic activity is substantially undiminished by heating at 60.degree. C. for 60 minutes or 95.degree. C. for 5 minutes relative to unheated t-PA; unreactive with polyclonal antisera raised against urokinase; the fibrinolytic activity is substantially stable at pH 5-10; exhibits fibrinolytic activity at pH 7.5-9.0 and temperature 39.degree.-41.degree. C.; a Km value of about 1.16.times.10.sup.-3 mol/liter and a V.sub.max of about 11.7.times.10.sup.-8 mol/liter for substrate S-2288; and fibrinolytic activity is inhibited by Co.sup.2+ Zn.sup.2+, Cd.sup.2+, Hg.sup.2+, Ni.sup.2+ and Cu.sup.2+.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 13 OF 17 USPATFULL
ACCESSION NUMBER: 89:60983 USPATFULL
TITLE: Tissue plasminogen activator oligosaccharide from normal human colon cells
INVENTOR(S): Feder, Joseph, University City, MO, United States
Tolbert, William R., Manchester, MO, United States
Rademacher, Thomas W., Oxford, United Kingdom
Parekh, Raj B., Oxford, United Kingdom
Dwek, Raymond A., Oxford, United Kingdom
PATENT ASSIGNEE(S): Monsanto Company, St. Louis, MO, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4851517		19890725
APPLICATION INFO.:	US 1988-159992		19880224 (7)

RELATED APPLN. INFO.: Division of Ser. No. US 1986-929950, filed on 12 Nov 1986, now patented, Pat. No. US 4751084
Continuation-in-part of Ser. No. US 1986-834080, filed on 26 Feb 1986, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Brown, Johnnie R.
ASSISTANT EXAMINER: Stone, Jacqueline M.
LEGAL REPRESENTATIVE: Meyer, Scott J., Williams, Jr., James W.
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Figure(s); 11 Drawing Page(s)
LINE COUNT: 2447
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Glycosylated plasminogen activator (t-PA) having a glycosylation pattern significantly different than exhibited by t-PA from Bowes melanoma cells is obtained from cultured normal human colon fibroblast cells

(CCD-18Co).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 14 OF 17 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 89008399 MEDLINE
DOCUMENT NUMBER: 89008399 PubMed ID: 3170576
TITLE: **Purification** and properties of a single-chain **urokinase**-type plasminogen activator form produced by subcultured human umbilical vein endothelial cells.
AUTHOR: Booyse F M; Lin P H; Traylor M; Bruce R
CORPORATE SOURCE: Department of Medicine, University of Alabama, Birmingham 35294.
CONTRACT NUMBER: HL-37938 (NHLBI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1988 Oct 15) 263 (29) 15139-45.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198811
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 20000303
Entered Medline: 19881110

AB Single-chain Mr 54,000 u-PA (scu-PA) was isolated, in the presence of aprotinin, from 3-liter batches of 60-h serum-free conditioned media obtained from subcultured (4-6th passage) human umbilical vein endothelial cells (HUVECs, approximately 1.8 x 10(9) cells). In the presence of heparin and endothelial cell growth factor, subcultured human umbilical vein endothelial cells produced u-PA proteins consisting of about 85-90% Mr 54,000 scu-PA and 10-15% two-chain Mr 54,000. The major scu-PA form was purified to homogeneity by **ion-exchange** chromatography on CM-Sephadex C-50, immunoadsorption on purified anti-u-PA IgG-Sepharose and affinity chromatography on p-amino-**benzamidine**-Agarose. Typically, about 8-10 micrograms of purified scu-PA protein (antigen/protein ratio = 1) was isolated from 3-liter batches of heparin-containing serum-free conditioned media with a yield of about 41% of the total starting u-PA antigen. Sodium dodecyl sulfate-polyacrylamide gel electrophoresis of this purified u-PA protein showed a single Ag-stained band (nonreduced and reduced), with an estimated molecular weight of about 54,000, which exhibited very low fibrinolytic activity. Purified HUVEC-derived scu-PA did not incorporate 3H-labeled diisopropyl fluorophosphate. This protein did, however, exhibit very low amidolytic activity (approximately 5,000 IU/mg) on the u-PA-specific synthetic substrate pyroglu-Gly-Arg-p-nitroanilide, very low plasminogen-dependent fibrinolytic activity on 125I-labeled fibrin coated plates, and directly activated 125I-labeled plasminogen following Michaelis-Menten kinetics with high affinity, Km = 0.72 microM and low turnover number, kcat = 0.0005 s-1. Treatment with plasmin rapidly converted the HUVEC-derived scu-PA to the active two-chain Mr 54,000 u-PA form (approximately 90,000 IU/mg). Binding to fibrin clots, using antigen quantitation, indicated about 20, 10, and 90% binding for equimolar amounts of HUVEC-derived scu-PA, two-chain u-PA, and tissue plasminogen activator standards, respectively. These results indicate that subcultured HUVECs synthesize and secrete their u-PA protein as a single-chain molecule with low intrinsic amidolytic and fibrinolytic activity, high affinity for plasminogen and no specific affinity for fibrin. The role of scu-PA in endothelial cell-mediated vascular function has yet to be clearly defined.

L4 ANSWER 15 OF 17 USPATFULL
ACCESSION NUMBER: 85:72365 USPATFULL
TITLE: Recombinant deoxyribonucleic acid which codes for plasminogen activator and method of making plasminogen activator protein therefrom
INVENTOR(S): Hung, Paul P., Waukegan, IL, United States
Lee, Shaw-Guang, Libertyville, IL, United States
Roychoudhury, Ranajit, Wadsworth, IL, United States
Ratzkin, Barry J., Houston, TX, United States
PATENT ASSIGNEE(S): Abbott Laboratories, North Chicago, IL, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4558010		19851210
APPLICATION INFO.:	US 1982-415491		19820907 (6)

RELATED APPLN. INFO.: Division of Ser. No. US 1980-137032, filed on 3 Apr 1980, now patented, Pat. No. US 4370417, issued on 25

09/815,533 SEARCH RESULTS/HISTORY

	Jan 1983
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Love, Ethel G.
LEGAL REPRESENTATIVE:	Wilcox, James L., Shelton, Dennis K., Katz, Martin L.
NUMBER OF CLAIMS:	1
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT:	497

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a deoxyribonucleic acid (DNA) segment related to a human plasminogen activator gene. The segment is inserted into a plasmid vector which in turn can be incorporated into a bacterium or other microorganism. The bacterium can then be cultured to produce a plasminogen activator protein having properties of human urokinase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 16 OF 17 USPATFULL

ACCESSION NUMBER:	83:4178 USPATFULL
TITLE:	Recombinant deoxyribonucleic acid which codes for plasminogen activator
INVENTOR(S):	Hung, Paul P., Waukegan, IL, United States Lee, Shaw-Guang, Libertyville, IL, United States Roychoudhury, Ranajit, Wadsworth, IL, United States Ratzkin, Barry J., Houston, TX, United States Schrenk, W. Jurgen, Weilheim, Germany, Federal Republic of Chen, Michael C., Painted Post, NY, United States
PATENT ASSIGNEE(S):	Abbott Laboratories, North Chicago, IL, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4370417		19830125
APPLICATION INFO.:	US 1980-137032		19800403 (6)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Marantz, Sidney
LEGAL REPRESENTATIVE:	Fato, Gildo E., Niblack, Robert L.
NUMBER OF CLAIMS:	25
EXEMPLARY CLAIM:	1,17
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT:	563

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a deoxyribonucleic acid (DNA) segment related to a human plasminogen activator gene. The segment is inserted into a plasmid vector which in turn can be incorporated into a bacterium or other microorganism. The bacterium can then be cultured to produce a plasminogen activator protein having properties of human urokinase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 17 OF 17 USPATFULL

ACCESSION NUMBER:	77:21167 USPATFULL
TITLE:	Agarose containing affinity matrix materials
INVENTOR(S):	Nishikawa, A. Hirotoshi, Webster, NY, United States Hixson, Jr., Harry F., Webster, NY, United States
PATENT ASSIGNEE(S):	Xerox Corporation, Stamford, CT, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4020268		19770426
APPLICATION INFO.:	US 1974-526028		19741121 (5)

RELATED APPLN. INFO.:	Division of Ser. No. US 1972-306241, filed on 13 Nov 1972, now abandoned which is a division of Ser. No. US 1971-141778, filed on 12 May 1971, now patented, Pat. No. US 3746622
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Brown, Johnnie R.
NUMBER OF CLAIMS:	1
EXEMPLARY CLAIM:	1
LINE COUNT:	374

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel affinity matrix material for trypsin and trypsin-like enzymes is disclosed. Methods employing this material to isolate and/or purify

crude extracts containing trypsin and trypsin-like enzymes and to store the purified enzymes obtained are also disclosed.

CAS IND